Simulation and the Future of Continuing Medical Education

Graham McMahon, MD, MMSc
President and CEO, ACCME
Disclosure of relevant financial relationships

• Nothing to disclose
Agenda

• Challenges and Opportunities in CME
• Creating learning impact
• Educational innovation and simulation
• Evolving the CME system
The World of Medicine is Changing Fast

Hard to anticipate

- how this generation of learners will be practicing
- What they need to know
- What skills they’ll need
- What tools they’ll use
Challenging Assumptions

Ballistic Trajectory

Klass D Academic Medicine 2007; 82 (6)
Major Challenges in CME

- Poorly valued by health leadership
- Lack of engaged clinician leaders
- Inadequate investment
- Extreme diversity of needs
- Spamming of learners
- Inadequate research
- Passive educational approaches
- Predominant focus on medical knowledge
- Passive learners
- Shifting expectations of learners
- Confusing and diverse credit systems
Shifting Challenges for Educators

- Emphasis on outcome rather than process or hours
- Increased demands on faculty – even less time to teach
- Distributed learners across venues
- More content areas (genomics, IT, leadership, complementary care, communication etc.)
- Teacher-centric model yielding to learner centricity
- Information is ubiquitous: focus on skills
Barriers to Learner Engagement

• Lack of time/competing demands
• Distraction/low attention span
• Fatigue
• Poor self-awareness/over-confidence
• Ambivalence/lack of motivation
## Intergenerational Learning Preferences

<table>
<thead>
<tr>
<th></th>
<th>Later-Career</th>
<th>Early-Career</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Format</strong></td>
<td>In person</td>
<td>Many</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td>Longer, less freq</td>
<td>Shorter, more freq</td>
</tr>
<tr>
<td><strong>Value</strong></td>
<td>Expertise</td>
<td>Efficiency, clarity</td>
</tr>
<tr>
<td><strong>Engagement</strong></td>
<td>Discussion</td>
<td>Interaction</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>Conference room</td>
<td>Workplace</td>
</tr>
<tr>
<td><strong>Timing</strong></td>
<td>Contemporaneous</td>
<td>Extemporaneous</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>General</td>
<td>Focused</td>
</tr>
<tr>
<td><strong>Focus</strong></td>
<td>Theoretical</td>
<td>Pragmatic</td>
</tr>
<tr>
<td><strong>Locus of control</strong></td>
<td>External</td>
<td>Internal</td>
</tr>
</tbody>
</table>
Pressures facing institutions

- Reform of Payment / Reimbursement Model
- New Demands for EHR and Data Systems
- Rising Costs
- Increased Transparency
- Changing Quality & Outcomes Requirements
- Consolidation of Healthcare Institutions
- Integrated Care
- Team-Based Care (interprofessional & interdisciplinary)
- High Pace of Medical & Technology Innovation
- Rise in Importance of Non-Clinical Skills

MEDICAL EDUCATION
### Scope of the Enterprise

**2014 Reporting Year**

<table>
<thead>
<tr>
<th>Physician Interactions</th>
<th>Other Learner Interactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,599,687</td>
<td>11,587,518</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Activities</th>
<th>Hours of Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>147,024</td>
<td>1,033,615</td>
</tr>
</tbody>
</table>

**Providers:**
- 1,225 SMS-accredited
- 683 ACCME-accredited
# Types of Activities in 2014

<table>
<thead>
<tr>
<th>Activities</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses</td>
<td>71,047</td>
</tr>
<tr>
<td>Regularly scheduled series</td>
<td>23,427</td>
</tr>
<tr>
<td>Internet (live)</td>
<td>4,063</td>
</tr>
<tr>
<td>Test-item writing</td>
<td>87</td>
</tr>
<tr>
<td>Committee learning</td>
<td>575</td>
</tr>
<tr>
<td>Performance improvement</td>
<td>470</td>
</tr>
<tr>
<td>Internet searching and learning</td>
<td>82</td>
</tr>
<tr>
<td>Internet (enduring materials)</td>
<td>34,006</td>
</tr>
<tr>
<td>Enduring materials (other)</td>
<td>8,452</td>
</tr>
<tr>
<td>Learning from teaching</td>
<td>149</td>
</tr>
<tr>
<td>Journal CME</td>
<td>4,596</td>
</tr>
<tr>
<td>Manuscript review</td>
<td>70</td>
</tr>
</tbody>
</table>
Overall Compliance Results for November 2008 through July 2015 (n=1,123)

[Bar chart showing compliance results for different categories (C1 to C22) with color coding for Not Applicable, Evidence Not Submitted, Compliance, and Non-compliance.]
Accreditation Decisions
November 2008 to July 2015
(n=1,123)
Agenda

• Challenges and Opportunities in CME
• Creating learning impact
• Educational innovation and simulation
• Evolving the CME system
Health professionals want a learning system that is:

- Relevant
- Efficient
- Effective
- Rewarding
- Personalized
Confidence and Ability

• Physician level of confidence is largely insensitive to diagnostic accuracy and case difficulty
• Especially problematic at younger ages
“By three methods we may learn wisdom: First, by reflection, which is noblest; Second, by imitation, which is easiest; and Third by experience, which is the bitterest.”
- Confucius
Responsiveness to Assessment

Early-Career
• Most responsive to
  – self-rating
  – peer feedback

Later-Career
• Most responsive to
  – comparative-rating
  – consultant feedback

Agrawal 2012, Eva 2010
• Engage the heart
  – Goal that is meaningful (task vs. knowledge orientation)
• Engage the mind
  – Interesting achievable task
  – Personalized feedback over time
• Engage with others
  – Nurture collaboration
Enhanced Educational Efficacy

1. Improve Didactics

- Limit formal speaking time.
- Make them case-based.
- Make time for problem-solving and Q&A.
- Follow a curriculum (incorporating QI goals)
- Facilitate social interaction/community-building.
- Provide all relevant credits (e.g. CME, MOC etc.)
Enhanced Educational Efficacy

2. Create Active Learning

I see and I forget.
I hear and I remember.
I do and I understand.
— Confucius

After 2 weeks, we tend to remember ...

- 10% of what we READ
- 20% of what we HEAR
- 30% of what we SEE
- 50% of what we SEE & HEAR
- 70% of what we SAY
- 90% of what we SAY & DO

Source: Edgar Dale (1969)
Guidance

P = Problem / whole task
C = Components
Enhanced Educational Efficacy

3. Engage Patients

• Planners
• Storytellers
  – Context
  – Meaning
  – Impact
• Feedback
Enhanced Educational Efficacy

4. Engage Interprofessional Teams

- Promote interprofessional collaboration
- Encourages professions to learn with, from, and about one another
- Move from individualized care to team care
- Enhance practice within professions
- Respect the integrity and contribution of each profession
Enhanced Educational Efficacy

5. Sustain the Change

- Change is sustained when it is
  - Supported
  - Measured
  - Rewarded
  - Reminded
  - Reflected
  - Repeated
Agenda

• Challenges and Opportunities in CME
• Creating learning impact
• **Educational innovation and simulation**
• Evolving the CME system
Educational Technologies are Advantageous in providing:

• Safe, controlled environments that eliminate risk to patients
• Authentic, realistic, contexts for learning and assessment
• Instruction tailored to individual or group needs
• Learner control of the educational experience
• Repetition and deliberate practice
• Uncoupling of instruction from place and time
Medical Simulation
Strengths of Simulation

• Providing feedback/drive self-awareness
• Repetitive practice/reinforcement
• Adapt to individual
• Curricular integration/continuity
• Learning efficacy/multiple learning strategies
• Controlled, safe environment
Competency Areas

- Medical knowledge
- Patient Care
- Communication skills
- Professionalism
- Psychomotor tasks
- Leadership
- Team training
- Decision-making
Other health professions

The diagram shows the distribution of health professions across Medical School and Teaching Hospital environments. The professions included are Nurses, EMT/Pre-Hospital, Pharmacists, Physician Assistants, Respiratory Therapists, Physical Therapists, Dentists, Nursing Assistants, Other, Occupational Therapists, Social Workers, Dieticians, and Speech Therapists. The data indicates a higher concentration of nurses and physical therapists in the Medical School environment compared to Teaching Hospital.
Increasing Engagement with Sim

• Team competency
  – Team performance management

• Individual competency
  – Procedures
  – Critical incidents
  – Leadership
  – Communication skills
  – Decision-analysis
Agenda

• Challenges and Opportunities in CME
• Creating learning impact
• Educational innovation and simulation
• Evolving the CME system
“By collaborating with ACCME, ABIM will open the door to even more options for physicians engaged in MOC and will allow them to get MOC credit for high-quality CME activities they are already doing.”

Richard J. Baron, MD
President and CEO
American Board of Internal Medicine
ACCME and AMA alignment

- Commitment by ACCME and AMA governance to move forward on alignment process
- Preliminary review of AMA PRA format with stakeholders
- Agreement on principles of alignment
- Listening sessions
- Forming a “Bridge Committee”
Evolution for Learners

• Become more self-aware
• Deliberately choose activities
• Avoid promotion & marketing
• Balance online and peer learning
• Actively participate
• Complete evaluations
Evolution for Health Institutions

- Appreciate the strategic power of education
- Recognize the ROI with local CME
  - quality, efficiency, teams, burnout, turnover
- Ensure clinicians have the time and resources to engage in CME
- Nurture teachers and CME professionals
Evolution for Providers

- Change passive to active learning environments
  - Include simulation opportunities
- Involve patients
- Focus on institutional quality goals
- Collaborate with system leadership
- Generate long-term relationships with learners and other organizations
Evolution for Regulators

• Focus on outcomes rather than process or time spent
• Recognize wide diversity of learning approaches
• Encourage and facilitate innovation
• Align regulators and systems
• Provide services to the community
A new approach…

CME Activities

C27 Health informatics

C23 Multi-interventional

C24 Inter profession

C25 Patient and public

The Creation of CME

C26 Health profession students

C35 Readiness Competence

C36 Improved Performance

C37 Processes of health care

Outcomes

The Program

C30 Works with others (C20)

C28 Population

C29 Individuals

C31 Utilizes strategies (C17/C19)

C32 Research

C33 Leadership CPD

C34 Creativity and innovation

Revised Accreditation with Commendation Criteria: A work in progress…
Thank you

Contact me:

gmcmahon@accme.org
Physicians with an Active License in the United States and the District of Columbia by Age, 2012 and 2014

- <40 years: 22.2% (2012), 20.6% (2014)
- 40–49 years: 24.6% (2012), 24.4% (2014)
- 50–59 years: 24.5% (2012), 23.6% (2014)
- 60+ years: 26.3% (2012), 30.9% (2014)
- Age Unknown: 2.5% (2012), 0.6% (2014)


Increased Efficacy?

• Evidence suggests that e-learning is more efficient
  – Gains in knowledge, skills, and attitudes occur faster than through traditional instructor-led methods.
  – Improved efficiency is increases motivation and performance.
  – Testing and Spacing Effects are powerful

• E-learning is more flexible
  – Can accommodate diverse learning styles

• E-learners have demonstrated
  – increased retention rates
  – better utilization of content
  – better achievement of knowledge, skills, and attitudes.